

UNITED STATES DEPARTMENT OF AGRICULTURE  
Rural Electrification Administration  
Washington 25, D. C.

## TELEPHONE ENGINEERING MEMORANDUM 518

SUBJECT: Coordination of borrowers' engineering activities with those of connecting companies

This memorandum is issued in the general interest of expediting the engineering design of telephone systems financed by REA loan funds.

The following procedure is recommended for coordinating the engineering activities of the borrower's engineer with any engineering effort which may be required on the part of existing companies with which the borrower's system will connect.

- A. Following the selection and REA approval of a borrower's engineer and the engineering service contract, where required, such engineer shall prepare immediately a trunking schematic diagram and key map showing the preliminary area coverage design of the proposed system indicating thereon the following basic data:
  - (1) Tentative locations of exchange offices and boundaries of each exchange area.
  - (2) A preliminary estimate of the number of subscribers to be served by each exchange.
  - (3) The areas in which extended scope service is contemplated.
  - (4) The exchanges between which interoffice trunking is required.
  - (5) Toll connections between system offices or with connecting telephone companies.
  - (6) The operator assistance office for each dial exchange, including the types of services to be provided.
  - (7) Estimates of station distributions and traffic flows.
- B. Upon completion of the above trunking schematic and key map, the borrower's engineer should arrange, through the borrower, a meeting with the connecting company agent of the company with which connections are desired.
- C. The connecting company agent will, upon request, arrange for engineering and other personnel as required to attend the meeting.

D. This meeting is necessary in order that specific engineering consideration may be given mutually to the following engineering problems:

- (1) Numbering plan - in relation to local, extended area, and toll dialing possibilities.
- (2) Determination of central office equipment requirements and operating features.
- (3) Determination of trunk requirements, including-
  - (a) Quantity, type and grade of trunks required for extended scope and/or operator office assistance service.
  - (b) Quantity, type and grade of intra-system interoffice trunks and/or tandem trunks.
  - (c) Quantity, type and grade of toll circuits.
- (4) Junction diagrams for integrating extended area service trunks and toll circuits with connecting company's dial exchanges.

E. In order to assure efficient utilization of the telephone plant investments made by the borrower, it will be imperative for the engineer to keep the connecting company advised of project development in such matters as:

- (1) Approval of area coverage design with modifications thereto.
- (2) Type of central office and toll terminal equipment being provided.
- (3) Schedule of central office equipment delivery and installation.
- (4) Schedule of construction outside plant trunk facilities.
- (5) Cutover planning and coordination of activities of mutual interest to the borrower and the connecting company, including customer instruction and directory matters.
- (6) Schedule for acceptance testing of trunks and trunk terminating equipment.
- (7) Schedule for final completion tests of operator office assistance trunks, extended area trunks, interoffice trunks and toll circuits.
- (8) Cutover schedule.
- (9) Cutover.
- (10) Post cutover activities as may be required.

J. K. O'Shaughnessy

J. K. O'Shaughnessy  
Chief, Engineering Division